Draft dated: August 14, 2006

Patient Care Workgroup Proposed Wisconsin Use Cases:
Describing Components of Wisconsin's Health Information Exchange

QUESTIONS FOR CONSUMER INTEREST WORKGROUP CONSIDERATION:

1. What, if anything, should be added to each use case to ensure it meets consumer health information needs?
2. What raises privacy concerns? (i.e., what, if anything, should be given extra technical and procedural safeguards when exchanged? Is there anything that should not be exchanged?)

1. RESULT AND DOCUMENT DELIVERY

A single Regional Delivery System (RDS) for point-to-point transmission of results and reports (e.g., labs, imaging, etc.) between service providers and clinical providers. For example, when a patient's laboratory results are completed the laboratory (service provider) sends results to the ordering physician (clinical provider) using the regional delivery system. Similarly, a specialist would use the same system to send consultation results to the referring clinician. Replaces multiple directories and delivery systems with a single system. Low-tech users can still receive information by fax, but availability of electronic text delivery can greatly reduce costs for providers with EMRs.

As standards for documents (eg CDA) and vocabulary (eg LOINC, SNOMED) are adopted, senders can begin sending machine-readable standardized documents for use in EMR and decision support systems.

System adoption simply requires users to identify the RDS as their preferred address. They inform the RDS how they desire results delivered (fax, secure email, etc.). Delivery options can be made sensitive to stat results and after-hours/vacation options, etc. If patients are included in the user pool they to may can also receive results as directed by the clinician.

So long as system only routes documents (rather than assembling databases of patients or results) it creates few if any new legal, privacy, confidentiality or data use issues.

- **1a. Public Health Electronic Lab Reporting (Mandated):** Public health agencies list RDS as method for sending mandated laboratory reporting (e.g., positive TB culture). [In some regions, e.g, Indianapolis, by agreement the RDS "opens" mail to determine which results are reportable to PH.] [1]

- **1.a.1. Public Health Lab Decision Support Alerts:** PH will know when a clinician receives reportable disease report, and has easy method of sending guidance to that clinician using the RDS

- **1.b. Result and document look-up (patient-centric data summary):** When regional exchange has completed necessary agreements and technical implementation of a patient record locator a patient-centric summary of results can be created. RDS has laid

[1] Note: Arrows indicate subsequent use case development that is at least partially dependent on prior use case development.

groundwork by establishing user identity management and secure communications system. It can futher accelerate movement in many ways when authority is granted to do so: tracking the flow of patient records to populate patient record locator; funneling most information transaction through a single point enables centralized standardization of data.

- **1.b.1. "Original record" content (e.g., clinical records, test interpretations) linked to patient summaries for look-up:** Documents like radiological interpretations, discharge summaries, and clinic notes are conveniently mounted for retrieval by users of patient-centric summaries to provide more detailed information when needed.

- **1. c. Image delivery and/or look-up:** Add on-line receipt or review of radiological (PACS) or other images (ECGs, EEGs, etc)

2A. REGISTRATION AND CLAIMS RECORD REPOSITORY

Claims information can indicate when, where and for what diagnoses visits and procedures occur, but data is often not available for weeks or months. Information from registration systems can provide similar information more rapidly, as well as validating a user as someone physically caring for a patient. Both types of data can be assembled into a patient-centric historical summary of care provided.

- **2.a.1.Registration-driven authorization for look-up functions:** Proposed flow is that registration information is sent by users as part of the process of being authorized to view patient data during a visit.

- **2.a.2.Look-up prior visits/diagnoses**

- **2.a.2.a.Public health chief complaint (CC) surveillance**

- **2.a.2.b.Public Health Chief Complaint-driven Decision Support Alerts:** Upon registration with a particular chief complaint the regional exchange returns text to the registering site containing advice from public health authorities. For example, during a pertussis outbreak, an advice message might be sent for patients reporting "cough" as part of the chief complaint informing which criteria might be used to select patients for pertussis testing.

- **2.a.2.c Public health demographic Decision Support Alerts:** Some demographic groups may benefit from alerts to providers given during episodes of care, for example, advice to vaccinate elderly patients during the seasonal influenza vaccination program

- **2.a.2.d. Public health resource utilization surveillance:** Particularly during disasters and outbreaks, public health agencies could use near-real-time aggregate registration information to assess the capacity and surge demand needs for health care resources.

2B. PATIENT HEALTH RECORD REGISTRATION MODULE

Enable patients to electronically enter, update, correct, and add typical registration information for use by providers. Replaces the clipboards that force patients to repeat information every time they are seen in a new location.

- **2.b.1Patient-entered data improves registration process:** Electronic patient health record registration dataset could improve reduce transcription error, recall fatigue and otherwise improve speed and accuracy of registration for health care providers.

- **2.b.2.Advance directives viewable:** Patients enabled to mount advance directive documents in their Personal Health Record. Can be uploaded as needed

2C. MEDICATION-ALLERGY-IMMUNIZATION RECORD

A patient-centered summary of dispensed prescribed medications, allergies and immunizations is available for review or uploading by clinicians and patients (using their PHRs).

- **2.c.1Clinician look-up or download**
- **2.c.1.aAllergy/interaction decision support:** Clinical decision support automatically alerts to allergy-drug interactions
- **2.c.1.b.Patient adherence decision support:** Comparison of prescribed with dispensed medications
- **2.c.1.c.Formulary decision support:** Clinician alerted to out-of-formulary prescriptions
- **2.c.1.d. Evidence-based medicine (EBM) guidelines decision support**
- **2.c.2Added to Patient Health Record**
- **2.c.2.a Future patient decision support**
- **2.c.2.b.Patient annotation of medical-allergy-immunization record**

2D. HARMONIZATION OF WISCONSIN IMMUNIZATION REGISTRY (WIR)-REGIONAL EARLY CHILDHOOD IMMUNIZATION NETWORK (RECIN) DATA AND FUNCTION

The WIR and RECIN currently both collect immunization data. This use case describes a method for harmonizing these two data sets. This could be accomplished through the merging of the two data sets or linking to both data sets as inputs.